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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/690,334	10/21/2003	Gary W. Kamerman	710601-1010	2178
24504	7590	08/23/2006		EXAMINER
THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP 100 GALLERIA PARKWAY, NW STE 1750 ATLANTA, GA 30339-5948			GEISEL, KARA E	
			ART UNIT	PAPER NUMBER
			2877	

DATE MAILED: 08/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/690,334	KAMERMAN, GARY W.
	Examiner Kara E. Geisel	Art Unit 2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 09 June 2006.

2a)  This action is FINAL.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## **Disposition of Claims**

4)  Claim(s) 1-26,28-48,52 and 53 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) 35-44 is/are allowed.

6)  Claim(s) 1-3,18-20,34 and 45 is/are rejected.

7)  Claim(s) 4-17,21-26,28-33,46-48,52 and 53 is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5)  Notice of Informal Patent Application (PTO-152)  
6)  Other: \_\_\_\_\_.  
\_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 18-20, 34, and 45 are rejected under 35 U.S.C. 102(e) as being anticipated by Johnson et al. (USPN 7,050,215), newly cited.

In regards to claim 1, Johnson discloses a spectral correlator comprising a specimen (fig. 1), and an optical device (fig. 5) configured to collect light from the specimen (512a-d) and to optically determine a similarity of a received first spectra of the light collected from the specimen and a second known spectra (column 2, lines 19-31) by directly comparing the light to a representation of the second known spectra (column 2, lines 60-67; column 3, line 49 - column 4, line 14).

In regards to claim 2, the optical device is configured to output a signal indicative of the similarity (column 4, lines 42-61 and column 5, lines 50-56).

In regards to claim 3, the correlator further comprises a detection device (fig. 5, 416) configured to sense the similarity signal and determine, based upon the similarity signal, whether a substance, represented by the second known spectra (column 2, lines 19-31) is present in the specimen (column 5, line 57 - column 6, line 13).

In regards to claim 18, Johnson discloses a spectral correlator comprising a specimen (fig. 1), an illuminating device configured to illuminate the specimen (column 1, lines 32-36, the sun is illuminating the gases), an optical device (fig. 5) configured to filter light from the specimen using an optical filter

indicative of a known spectra (column 2, lines 19-31) and to determine, based on the filtered light, the similarity of a received spectra defined by the light and the known spectra (column 4, lines 42-61 and column 5, lines 50-56).

In regards to claim 19, the optical device is configured to output a signal indicative of the similarity (column 4, lines 42-61 and column 5, lines 50-56).

In regards to claim 20, the correlator further comprises a detection device (fig. 5, 416) configured to sense the similarity signal and determine, based upon the similarity signal, whether a substance, represented by the second known spectra (column 2, lines 19-31) is present in the specimen (column 5, line 57 - column 6, line 13).

In regards to claim 34, Johnson discloses a spectral correlator comprising a specimen (fig. 1), means for receiving light reflected off and/or emitted by the specimen (fig. 1; light collected is reflected sunlight column 1, lines 32-36), and means for optically correlating the light received to determine the similarity of the spectra of received light from the specimen and a second known spectra (column 2, lines 19-31), the correlating means having an optical filter for filtering the light (fig. 5, 408), the optical filter indicative of the second known spectra (column 2, lines 19-31) such that the filtered light has an intensity indicative of the degree to which the spectra of the received light and the second known spectra are similar (column 4, lines 42-61 and column 5, lines 50-56).

In regards to claim 45, Johnson discloses a spectral correlation method comprising receiving light from a specimen (fig. 5, 512a-d), filtering the light with an optical filter (408) indicative of a known spectra corresponding to at least one substance (column 2, lines 19-31) such that a spectra of the light is optically multiplied depending on a similarity between the spectra of the light and the known spectra (column 5, lines 50-56), determining whether the at least one substance is present in the specimen based on the filtered spectra (column 5, line 57 - column 6, line 13) and providing an indication as to whether

the at least one substance is present in the specimen based on the determining step (column 6, lines 10-13).

*Allowable Subject Matter*

Claims 35-44 are allowed over the prior art of record.

Claims 4-17, 21-26, 28-33, 46-48 and are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

As to claims 4 and 21, the prior art of record, taken alone or in combination, fails to disclose or render obvious a spectral correlator where an optical device comprises a first lens configured to perform a **Fourier transform** on the received first spectra, in combination with the rest of the limitations of claims 4 and 21.

As to claim 35, the prior art of record, taken alone or in combination, fails to disclose or render obvious a spectral correlation method comprising optically performing a first Fourier transform on a first spectra of the light as the light is passing through a first lens to obtain a transformed first spectra and optically multiplying the transformed first spectra with a representation of a known spectra to obtain a similarity signal, in combination with the rest of the limitations of claim 35.

As to claim 42, the prior art of record, taken alone or in combination, fails to disclose or render obvious a spectral correlation method comprising separating a first spectra of the light into its component colors and optically multiplying the separated first spectra with a representation of a known spectra as the light is passing through an optical component indicative of the known second spectra to obtain an optical signal indicative of the degree to which the first spectra and the known second spectra are similar, in combination with the rest of the limitations of claim 42.

As to claim 46, the prior art of record, taken alone or in combination, fails to disclose or render obvious a spectral correlation method wherein a filtering step comprises the step of performing an analog multiplication of a **Fourier transform** of the spectra of the light with a **Fourier transform of the known spectra**, in combination with the rest of the limitations of claim 46.

As to claim 52, the prior art of record, taken alone or in combination, fails to disclose or render obvious a spectral correlator wherein an optical device is configured to focus all discrete wavelength lines of the spectra to the same spot, in combination with the rest of the limitations of claim 52.

As to claim 53, the prior art of record, taken alone or in combination, fails to disclose or render obvious a spectral correlator wherein an optical device is configured to focus all discrete wavelength lines of the spectra to a single detector, in combination with the rest of the limitations of claim 53.

#### *Additional Prior Art*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art made of record is Grumet (USPN 3,779,492), and Leib (USPN 4,958,376).

Grumet and Leib both disclose optical correlators, which receive images of a specimen and have an optical device to collect the image from the specimen and to optically determine a similarity of the image collected to a known image by directly comparing the light to a representation of the known image.

#### *Response to Arguments*

Applicant's arguments, see the amendment, filed June 9<sup>th</sup>, 2006, with respect to the rejection(s) of claim(s) 1-26 and 28-51 using the Hartman reference (H780) have been fully considered and are persuasive in that Hartman does not disclose directly comparing the light from a specimen to the second known spectra (the light goes through a spectrometer first), and it appears that the comparison between the two spectra is not done by passing the first received spectra through a filter indicative of the second known spectra to determine a similarity of the received spectra to the known spectra, but instead is done by comparing the received spectrum and a second known spectrum electronically. Therefore, the

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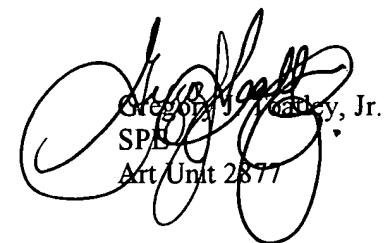
rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Johnson et al. (USPN 7,050,215).

*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kara E Geisel whose telephone number is **571 272 2416**. The examiner can normally be reached on Monday through Friday, 8am to 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr. can be reached on **571 272 2800 ext. 77**. The fax phone number for the organization where this application or proceeding is assigned is **571 273 8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Gregory J. Toatley, Jr.  
SPS  
Art Unit 2877

K.G.  
KEG  
August 8, 2006